



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

August 14, 2007

Mr. James F. Williamson, Jr.  
Tennessee Valley Authority  
400 West Summit Hill Drive  
Knoxville, TN 37902

Subject: EPA's NEPA Review of TVA's FEIS for the "Bear Creek Dam Leakage Resolution Project"; Franklin County, Alabama; CEQ #20070337;  
ERP #TVA-E39069-AL

Dear Mr. Williamson:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject Tennessee Valley Authority (TVA) Final Environmental Impact Statement (FEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. TVA proposes to repair Bear Creek Dam in compliance with federal dam requirements and resolve a public safety concern stemming from continued leakage through the dam. As a consequence to this proposed action, the pool elevation of the Bear Creek Reservoir and associated downstream flows would be modified which in turn would affect shoreline wetlands. EPA provided written comments on the Draft EIS (DEIS) for this proposed project in a letter dated July 16, 2007.

As in the DEIS, TVA has continued to identify Alternative 2 as its preferred alternative in the FEIS. It remains unclear, however, which sub-alternative design was preferred. We assume a selection will be discussed in the TVA Record of Decision (ROD). However, how will the public be notified of this decision? Inclusion of the preferred design in the FEIS would have been beneficial.

EPA has focused its review of the FEIS on the TVA responses to our comments on the DEIS (App. B in the FEIS). We offer the following:

**Response to Comments**

\* TVA Response to EPA Comment #1 – We note that the 77 acres of scrub-shrub, emergent and aquatic bed wetlands that are predicted to be lost for Alternatives 2 and 4 do not include forested wetlands. It is unclear, however, if any reservoir forested wetlands would be lost or affected by the overall project, particularly for preferred Alternative 2. For example, would the proposed 8-ft elevation of the summer pool (from 568 ft to 576 ft) associated with Alternative 2 inundate any forested wetlands in the

inflow (or other) portion of the reservoir, or are banks too steep to cause significant flooding?

\* TVA Response to EPA Comment #2 – Although this response indicates that fringe wetlands were expected to “persist” under Alternative 3 despite the proposed 3-ft lowering of the pool (from 568 ft to 565 ft), we assume that these wetlands would not survive the 8-ft inundation associated with Alternative 2 (from 568 ft back to original 576 ft design). We understand from this response that re-vegetation of new wetlands along the reservoir fringe for the proposed 576-ft summer pool is estimated to take 2-3 years. This is apparently based on TVA’s observation or estimate (as noted in Response #4) that re-vegetation of in-reservoir wetlands required “three growing seasons” (since spring 2005) when the summer pool was lowered from 576 ft to 568 ft for safety reasons. However, no compensation was offered to offset this temporal loss in wetland function for the two or three years of re-vegetation. Response #7 stated that “[t]he context and the intensity of the temporary loss of wetland function are not significant enough for mitigation.”

\* TVA Response to EPA Comment #3 – We note from this response that “[i]nput from the COE indicates no 404 permits would be needed for wetland impacts, although there may be a need for a Nationwide Permit 3 with specific conditions for dam repair.” This was based on the fact that no fill would be placed in wetlands, and the fringe wetlands that would be flooded under Alternative 2 have not been established long enough to show hydric soil characteristics and therefore would not be jurisdictional.

While soils along the shoreline at the 568-ft pool may not yet have assumed the characteristic colors or mottling of hydric soils, EPA would consider the soils in these areas to be hydric by virtue of the fact that they are now flooded. Therefore, EPA finds that the hydric soil component of these wetlands is already present in addition to the evident hydrologic and vegetative components required to define jurisdictional wetlands. In addition, we note that these soils had been previously inundated/saturated until 2005, since the reservoir had been operated at a higher pool (576 ft) until then. Accordingly, TVA may wish further discuss the jurisdictional nature of these wetlands with the COE to verify the need for an individual Section 404 permit and any mitigation as appropriate.

\* TVA Response to EPA Comment #5 – We are pleased that TVA has observed successful natural regeneration of wetlands along new shoreline for Bear Creek Reservoir during their 2006 study (after the lowering of the pool for safety reasons). However, our intent for this comment was to receive a response that documents the environmental conditions along the shoreline of Bear Creek Reservoir that would promote (or limit) such re-vegetation (topography, soil erodibility, soil characteristics, exotic plants, wildlife interference, etc.). It is also not a given that the favorable shoreline conditions allowing re-vegetation at a 568-ft pool also exist at a 576-ft pool (especially bank steepness). We recommend that the ROD address (list) these conditions and discuss if they would favor re-vegetation.

\* TVA Response to EPA Comment #7 – See above comments for Response #2 regarding mitigation for temporal wetland losses.

\* TVA Response to EPA Comment #8 – We agree that wetland re-vegetation along suitable shoreline areas should reasonably control soil erosion and sedimentation in the reservoir. However, until such re-vegetation occurs and becomes established in the projected two to three year timeframe, shoreline soil erosion may not be well controlled. How would TVA control soil erosion into the reservoir during this transitional period? Our DEIS comments suggested placement of artificial buffers to filter runoff into the reservoir as well as monitoring to determine the success of soil erosion controls. Erosion control measures might include implementation and maintenance of silt fences, planting of upland vegetation, retention of leaf litter, and other BMPs. From a practical perspective, such structures should be focused on any highly erodible areas along the shoreline. The ROD should address erosion controls during the transitional period.

\* TVA Response to EPA Comment #9 – We are pleased that TVA has been so active in preserving reservoir water quality through its studies, community partnerships and participation in an interagency watershed improvement team for Bear Creek Reservoir. These efforts have surely improved reservoir water quality or prevented further degradation. Will any additional efforts be made to target remaining water quality issues such as low levels of dissolved oxygen (DO) within the reservoir?

## **Summary**

Based on the TVA responses provided, we find that preferred Alternative 2 would inundate 77 acres of in-reservoir herbaceous wetlands along the shoreline as the pool level is raised by eight feet, back to its original 576 ft summer pool design (documentation of any impacts to forested wetlands is requested). As such, existing fringe wetlands at the 568-ft shoreline would be covered and die off, although new wetlands are expected to naturally re-vegetate at the new 576-ft shoreline based on TVA's study of this reservoir (documentation of conditions that would allow or promote re-vegetation is requested). These wetlands may require two to three years to establish, resulting in a temporal functional loss. Of particular note is the loss of their water quality function to buffer the reservoir from watershed activities and specifically to filter runoff into the reservoir. Based on COE input, TVA does not find that an individual Section 404 permit is needed because the wetlands to be inundated are not considered jurisdictional because hydric soils have not yet developed, and TVA's conclusion that the temporal losses for wetland inundation are not significant enough to warrant mitigation.

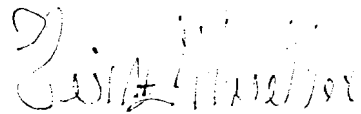
## **Recommendations**

EPA supports this and similar dam safety projects from a safety, flood control and compliance perspective. We also support the increase in minimum flows for the benefit of downstream mussels and other aquatic species. However, if Alternative 2 is pursued, EPA recommends that TVA and the COE further discuss the jurisdictional nature of the 77 acres of wetlands that would be flooded and lost along the present 568-ft pool

shoreline of the Bear Creek Reservoir to verify the need for an individual Section 404 permit and mitigation as appropriate. We also recommend that TVA provide appropriate artificial buffers in any highly erodible areas along the shoreline of the new 576-ft pool to filter runoff into the reservoir until new wetlands are re-established there. Finally, we suggest that TVA continue its good work with the watershed team to improve reservoir water quality by coordinating shoreline and shoreland activities with affected stakeholders.

We appreciate the opportunity to review this FEIS and would appreciate a copy of the prospective ROD. Should you have questions on our comments, please contact Chris Hoberg of my staff at 404/562-9619 or [hoberg.chris@epa.gov](mailto:hoberg.chris@epa.gov).

Sincerely,

A handwritten signature in dark ink, appearing to read "Heinz J. Mueller", is written over a faint, circular official stamp.

Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management